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# Energy and Mineral Resources on the Public Lands

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artment of the Interior
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The public lands managed by the Department of the Interior's Bureau of Land Management (BLM) contain substantial amounts of energy and mineral resources, including coal, oil and gas, mineral materials, and metallic minerals. As much as 60 percent of the coal reserves in the western United States, and 35 percent of the nation's reserves of uranium, as well as other minerals, are on public lands. BLM administers an onshore surface and mineral estate of 272 million acres (108 million hectares), primarily in the western United States, plus only the mineral estate underlying another 300 million acres (120 million hectares) all over the United States.

In accordance with the laws of the United States, BLM encourages the exploration and development of energy and mineral resources in an environmentally sound manner. Energy and mineral resources are made available principally through provisions of the Mining Law of 1872 as amended; the Mineral Leasing Act of 1920 as amended; the Materials Act of 1947 as amended; and the Acquired Lands Leasing Act of 1947 as amended. Based on these laws, the energy and mineral resources on public lands are classified as locatable, leasable, and salable depending on the type of mineral deposit and whether it underlies public domain land (that is, land that has never been in private ownership) or public land acquired by the federal government. Virtually all energy and mineral resources (except salable minerals) are subject to special leasing laws and regulations on acquired lands.

BLM has both regulatory and management responsibilities. It is responsible for leasing, sale, or other disposal of onshore minerals, including land use planning; issuance of leases; approval of plans for exploration and development; inspection of leases to assure compliance with regulations and approved plans; resource protection; evaluation and assessment of resources to ensure the receipt of fair market value; and adjudication of such matters as mineral exchanges and trespass.

## Salable Mineral Resources . . .

Salable mineral resources are common varieties of minerals such as sand, gravel, stone, pumice, pumicite, cinder, and clay. These mineral materials may be sold at fair market value under a contract to citizens upon request or by competitive sale, whichever is in the best interest of the public. Local governments or nonprofit organizations may obtain these materials free of cost for community purposes, so long as the material is not to be bartered or sold. Competitive sale contracts and permits have a maximum duration of 10 years, while noncompetitive contracts have a maximum duration of 5 years. Permits to nonprofit organizations are limited to 1 year.

In 1988, the production from sales from public lands was 1.45 million cubic yards of sand and gravel; over 50,000 cubic yards of clay; and over 272,000 cubic yards of stone.

The salable mineral resources on public lands are made available through the Materials Act of 1947, as amended.

## Locatable Mineral Resources . . .

Locatable mineral resources on public lands include both metallic and nonmetallic minerals. Locatable minerals on public lands may be claimed by anyone who is a United States citizen, or by a corporation organized under state law. A mining claim can be staked only after a valuable mineral deposit has been discovered. BLM must approve a plan of operations, including reclamation measures, for mining operations disturbing more than 5 acres of public land. BLM reviews an average of 455 plans of operations annually.

The Mining Law of 1872 as amended is the principal law through which locatable minerals on public lands are made available. The law encourages mining companies to self-initiate exploration and development, and allows for exclusive use of the surface for mining and milling purposes after discovery of a valuable mineral deposit.

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## Fluid Energy Resources . . .

BLM issues leases for exploration and extraction of three kinds of fluid energy resources on public lands: oil and gas and geothermal. All public lands that are available for oil and gas leasing must first be offered through competitive leasing. Noncompetitive leasing takes place after a parcel has been offered competitively, but failed to receive a bid. Similarly, there are competitive and noncompetitive leases for geothermal resources. Applications to conduct exploration, operations and other related activities are reviewed to ensure technical competence. Consideration is given to environmental protection and mineral resource conservation.

In the oil and gas program during fiscal year 1987, 1,870 applications for permit to drill were processed and 1,176 new wells were started. In the geothermal program, 76 leases were issued in fiscal year 1988.

The fluid energy resources on public lands are made available through the Mineral Leasing Act of 1920 as amended, and the Geothermal Steam Act of 1970 as amended.

## Solid Leasable Mineral Resources . . .

BLM's responsibilities for solid leasable minerals include both leasing and operations. The leasing program consists of issuing competitive and noncompetitive leases, licenses, and permits; it includes land use planning and environmental analysis. The operations program consists of actions taken after the issuance of a lease, including inspection and enforcement, production verification, monitoring compliance with diligence requirements, and in addition, for noncoal minerals, reclamation. For coal operations, reclamation is the responsibility of the Department of the Interior's Office of Surface Mining Reclamation and Enforcement. For both solid and fluid leasable minerals, the responsibilities for collection of mineral royalties lie with the Interior Department's Minerals Management Service.

During fiscal year 1988, the production of some leasable minerals from federal lands was as follows:

- Coal - 187 million tons
- Lead/zinc - 399,500 tons
- Phosphate - 4.3 million tons
- Potash - 1.9 million tons
- Sodium - 3.6 million tons
- Other - 4.5 million tons

The principal law authorizing the exploration and extraction of solid leasable minerals from public lands is the Mineral Leasing Act of 1920 as amended.

## Environmental Impacts and Reclamation . . .

On public lands, private industry is primarily responsible for the exploration and extraction of energy and mineral resources, and for reclamation of the affected lands. BLM's role is to represent the interests of the American public and — working with the minerals industries, other governmental agencies, and the public — to ensure environmentally sound development.

Mineral exploration and development are governed, not only by specific leasing or mining laws, but also by the many land management and environmental laws enacted within the past several decades. These laws include principally the National Environmental Policy Act of 1969 and the Federal Land Policy and Management Act of 1976, as well as numerous laws affecting specific natural resources, such as the Clean Air Act, the Endangered Species Act, the Wilderness Act, etc.

BLM relies on a number of management tools to ensure environmentally sound development and reclamation. These tools include land use planning, environmental analysis, regular monitoring and inspection of operations, bonding of operators when appropriate, and close cooperation with both industry and other public land users.

BLM looks for many factors in reclamation efforts. For example:

- Will the reclamation ensure stability of the subsurface as the first step in reclaiming the surface? Are subsurface workings, such as holes and shafts, stabilized and plugged?

- Does the surface reclamation ensure proper water management and soil conservation? Has significant surface erosion, in the form of large rills or gullies, been prevented.

- Will the reclamation include necessary and reasonable revegetation and sufficient follow-up to ensure success? Will post-mining vegetation consist of diverse populations of species capable of supporting post-mining uses such as wildlife habitat and livestock forage?

## Automation and Computer Capabilities . . .

BLM is a leader in implementing a fully automated Land Information System (LIS). As a multiple-use agency, BLM manages vast quantities of data about public land resources. When fully implemented, beginning in the early 1990s, the LIS will facilitate the storage, analysis, and retrieval of these data. This improved data management will, in turn, improve the quality of BLM's land use planning and decision-making, as well as the efficiency of day-to-day operations.

The LIS will link three major components, and will use computerized geographic information system technology.

1. **Automated Geographic Coordinate Data Base (GCDB):** BLM is building the automated GCDB from its public land survey data, which are fundamental to describing the boundaries of land parcels in many states. The GCDB will connect, for the first time, data about land status and boundaries, which are usually described by legal land parcels, and natural resources data, which are usually described by a reference system such as latitude/longitude.

2. **Automated Land and Mineral Record System (ALMRS):** BLM's files include more than a billion land and mineral documents. Automating this information through ALMRS will speed the processing of cases (such as oil and gas leases or patents for mining claims), the response time for questions about land status (such as availability for mineral development or the basic property title data for a parcel of federal land), and the preparation of management reports and statistics.

3. **Automated Resource Data (ARD):** BLM's natural resources data include wildlife habitat, soils classifications, vegetative condition, and locations of threatened or endangered species, recreation opportunities, cultural sites, wild horse herds, etc. The energy and mineral resources data range from the location of gravel pits for road construction to critical and strategic minerals for national defense. They also include documentation for the decisions to permit development of mineral resources and the subsequent production data. Incorporating Automated Resources Data into the LIS will streamline consideration of these different resources during land use planning and decision-making for multiple-use management.